WEBECO

OPERATING INSTRUCTIONS

Steam Sterilizer

AUTOMAT 35

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1. Preliminary Remarks

1. These Operating Instructions form the basis for the training of the operator and provides knowledge which is required for the handling and maintenance of the device.

2. They accompany the device and contain the description, regulate the assembly, its initial operation, the maintenance-, service- and periodic works, including performance check and repair works as well as storage and transport.

3. The references to illustration- and item numbers which are contained in the text, have been put into brackets, e.g. (3/5) means: Illustration #3, Item #5.

4. These Operating Instructions include important instructions which have to be observed particularly. They are marked by: "CAUTION", "ATTENTION" or "NOTE".

   CAUTION
   applies to working- or operating methods which have to be exactly complied with, in order to exclude any endangerment of persons. These also include references to special dangers connected with the handling of the device.

   ATTENTION
   refers to working- and operating methods which have to be exactly complied with, in order to avoid any damage to or destruction of the device. This also applies to works which are to be carried out regularly and have to be performed after excessive load or with unusual atmospheric influences or modes of operation.

   NOTE
   applies to technical requirements which have to be particularly observed by the user.

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5. Improper operation may lead to personal injuries or property damage.

   Preparatory measures for application may only be performed by the user/operator or by specially instructed staff.

2. Designation of the Device

Article Name	:	Small-Size Steam Sterilizer WEBECO AUTOMAT 35
Subject Number	:	1 0107 1001 1 0107 1003 (Dental Version)
Manufacturers	:	Webeco GmbH, Mühlenstraße 38 23611 Bad Schwartau, Germany

3. Intended Use

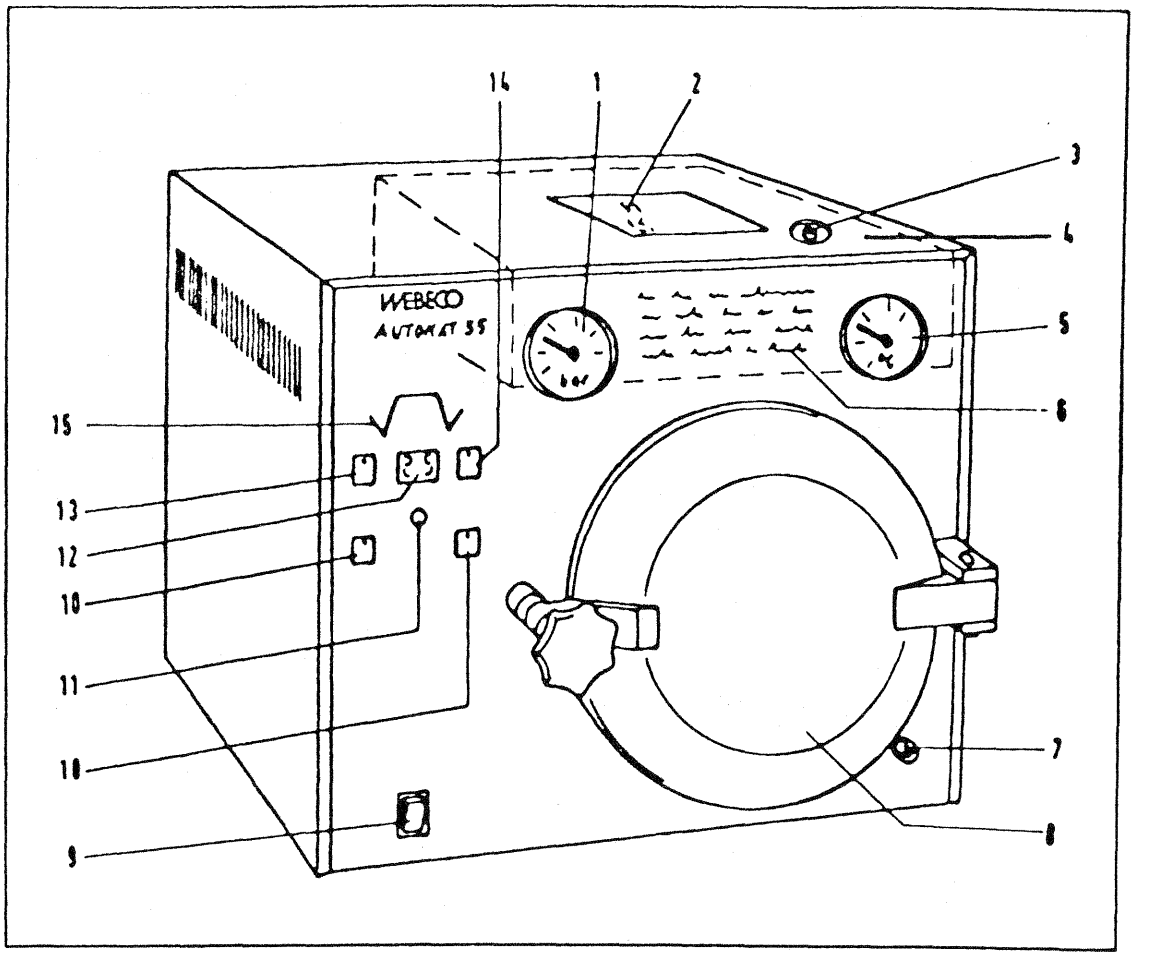
The WEBECO AUTOMAT 35 is a small-size steam sterilizer, and serves to sterilize surgical and dental instruments, rubber articles and textiles at 121 °C or at 134 °C. It is intended for the stationary application.

4. Technical Data

Dimensions	:	440 x 500 x 700 mm (H x W x D)
Installation Area	:	500 x 550 mm (W x D)
Useful-Space Size	:	250 x 380 mm (Diameter x Depth)
Weight	:	55 kg
Mains Supply	:	230 V / 50 Hz / 16 A - min.10 A
Water Supply	:	Threaded Connection G 3/4

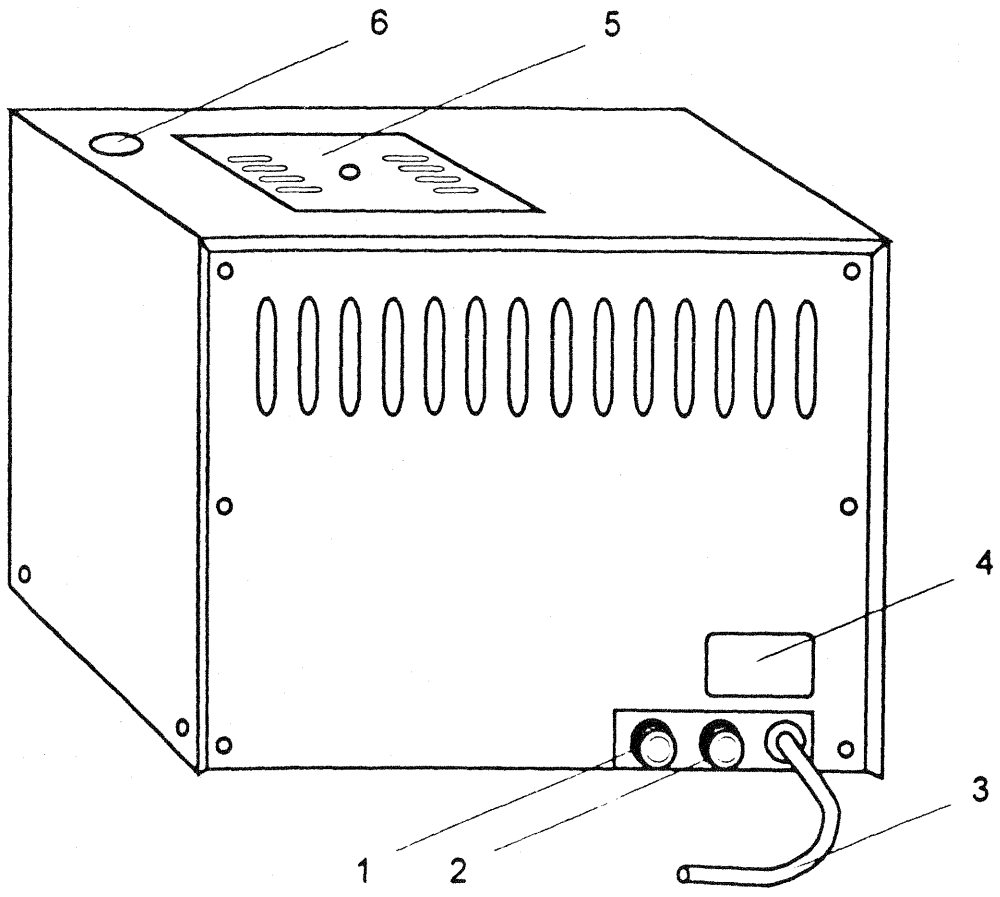
5. Device Layout

Illustration 1 WEBECO AUTOMAT 35, Front View



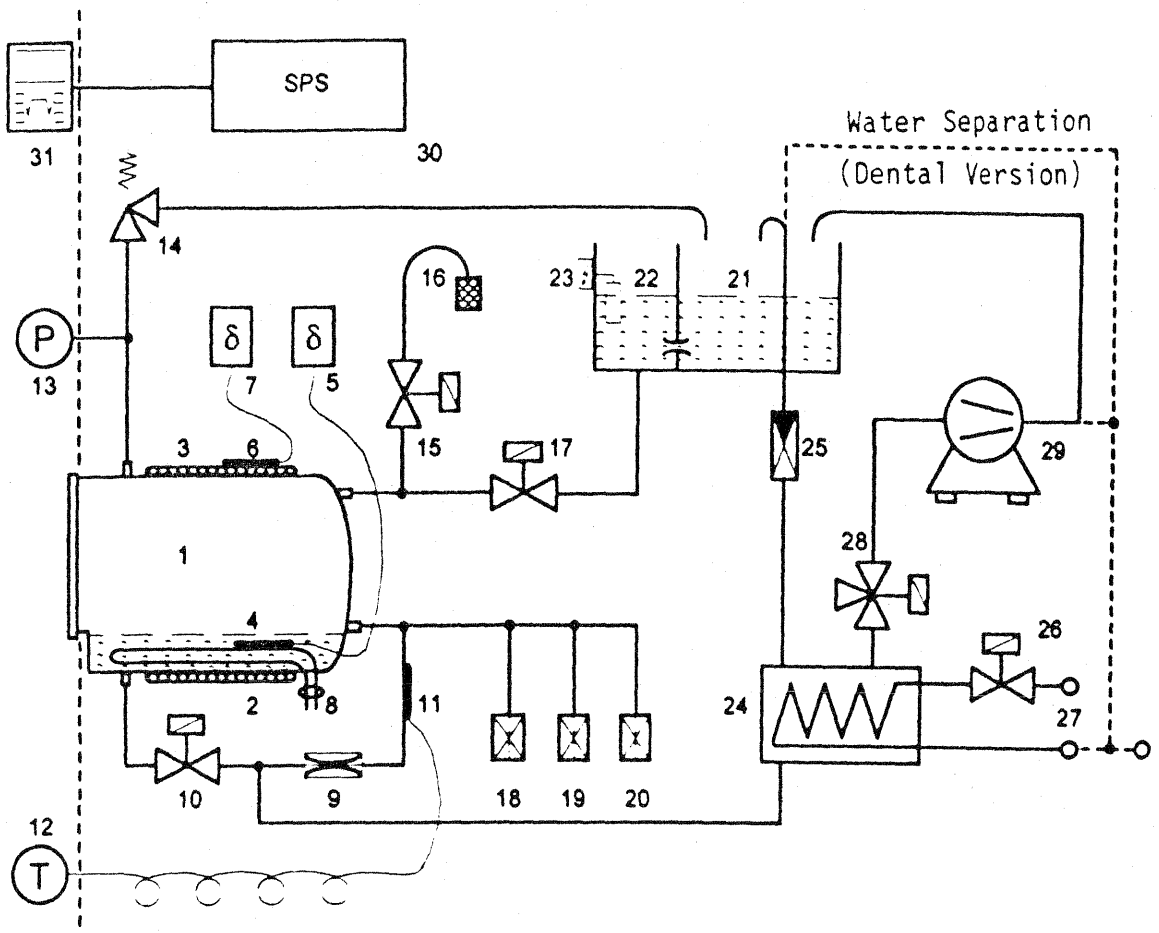
1 Manometer with maximum indicator
2 Feed Opening and Water-Level Display
3 Safety Valve
4 Feed-Water Supply Device with Dosing Apparatus
5 Thermometer
6 Short-Form Operating Instructions
7 Drain Valve for Feed-Water Supply Device and Dosing Apparatus
8 Useful-Space Door
9 Mains Switch
10 Selection Keys for Drying Time
11 Lack-of-Water Display
12 Digital Time Display
13 Starting Key 121 °C
14 Starting Key 134 °C
15 Program Flowchart

Illustration 2 WEBECO AUTOMAT 35, Rear View



1 Cooling-Water Connection - Supply
2 Cooling-Water Connection - Drain
3 Electric Connection with Shockproof Plug
4 Identification Plate
5 Lid for Feed-Water Supply Device
6 Safety Valve

Illustration 3: Operational Diagram WEBECO Automat 35



1 Sterilizing-Pressure Vessel
2,3 Jacket Heatings
4 Temperature Probe Immersion Heating
5 Thermostat Immersion Heating
6 Temperature Probe Jacket Heating
7 Thermostat Jacket Heating
8 Immersion Heating
9 Flow Nozzle
10 Pressure-Relief Valve
11 Sterilizing-Temperature Probe
12 Sterilizing-Temperature Display
13 Manometer
14 Safety Valve
15 Aeration Valve
16 Aeration-Bacterial Filter
17 Filling Valve
18 Sterilizing-Pressure Regulator 121°C Program
19 Sterilizing-Pressure Regulator 134°C Program
20 Vacuum-Pressure Regulator
21 Feed-Water Device
22 Dosing Apparatus
23 Level Control
24 Condenser
25 Check Valve
26 Cooling-Water Stop Valve
27 Cooling-Water Supply
28 Aeration Valve Vacuum Pump
29 Vacuum Pump
30 Electronic Process-Control Unit
31 Operating- and Display Unit

6. Functional Description

The WEBECO - Small-Size Steam Sterilizer Automat 35, sterilizes with tightly-saturated steam and works according to the interrupted pre-vacuum method.

It contains 2 programs:

1. for a sterilizing temperature of 121 °C
2. for a sterilizing temperature of 134 °C.

The operational diagram is shown in Illustration 3.

The sterilizing time is:

20 minutes at 121 °C
5 minutes at 134 °C.

Depending on the treatment, the batch time accordingly lasts:

approx. 50 minutes for the 121 °C program) depending
approx. 40 minutes for the 134 °C program) on the loading.

Integrated into the control are 5 times which are automatically called in during the program rundown:

1) 20 minutes sterilizing time for the 121 °C program
2) 5 minutes sterilizing time for the 134 °C program
3) 3 minutes pressure relief
4) 10 minutes after-drying
5) 20 minutes after-drying.

The program runs are shown in diagrams 1 and 2. By opening the tap for the cooling water (to be provided by client), and switching on the mains switch (1/9), the device is switched ready for operation.
The cooling-water supply is reduced as required by means of a throttle and automatically connected in the various operating phases by means of a solenoid valve (3/26).

After the START which takes place by pressing one of the two program keys (1/13, 1/14), at first the vacuum pump (3/29) and the controlled upper jacket heating (3/9) are switched on.

Thereby the chamber pressure is reduced to the switching point of the vacuum regulator (3/20) which lies at approx. - 0.8 bar. As soon as the vacuum regulator switches, the vacuum pump stops, and the feed-water filling valve (3/17) opens the connection from the dosing apparatus (3/22) to the evacuated sterilizing vessel.

Now the water in the dosing apparatus can run into the sterilizing vessel.
At the same time, the immersion heaters (3/8), and the lower jacket heating (3/2) are switched on, and the increase of pressure thereby initiated.

As soon as the boiler pressure exceeds the atmospheric pressure, a flow starts via the flow nozzle (3/9), in order to remove the remaining air. The escaping steam is brought to condensation in the condenser (3/24), and led back to the supply device.

As soon as the pressure in the sterilizing vessel has reached the pressure correlating with 121 °C, the heating is switched off, and the steam is discharged via the pressure-relief valve (3/10). After approx. 1 minute, the 2nd evacuation phase starts, during which the steps of the 1st phase are repeated.

As soon as the pressure in the sterilizing vessel has now reached the pressure corresponding with the respective sterilizing temperature, the sterilizing time is started and the immersion heater switched off simultaneously.

By connecting or switching off the lower jacket heating (121 °C) or the immersion heater (134 °C), the according pressure regulator (3/18 or 3/19) takes over the pressure- and thus the temperature regulation so long, until the sterilizing time has ended, and it is switched over to pressure relief.

The residual water yet existing in the sterilizing vessel at this point of time, is conveyed back from the sterilizing vessel via the condenser into the feed-water supply device (3/21) by the vessel pressure at the deepest point, or - in the dental version - to the water drain of the cooling coil.

During the pressure relief, the steam flows into the condenser from the sterilizing vessel, and the resulting condensate into the supply device or into the drain. After 3 minutes, the vacuum pump is switched on which further reduces the vessel pressure. The post-vacuum phase runs 10 or 20 minutes, depending on the selected drying time.

Afterwards, the pump is switched off, and the sterilizing vessel aerated via a sterile filter (3/16).

DIAGRAM 1:
Program Description for a Sterilizing Temperature of 121° C

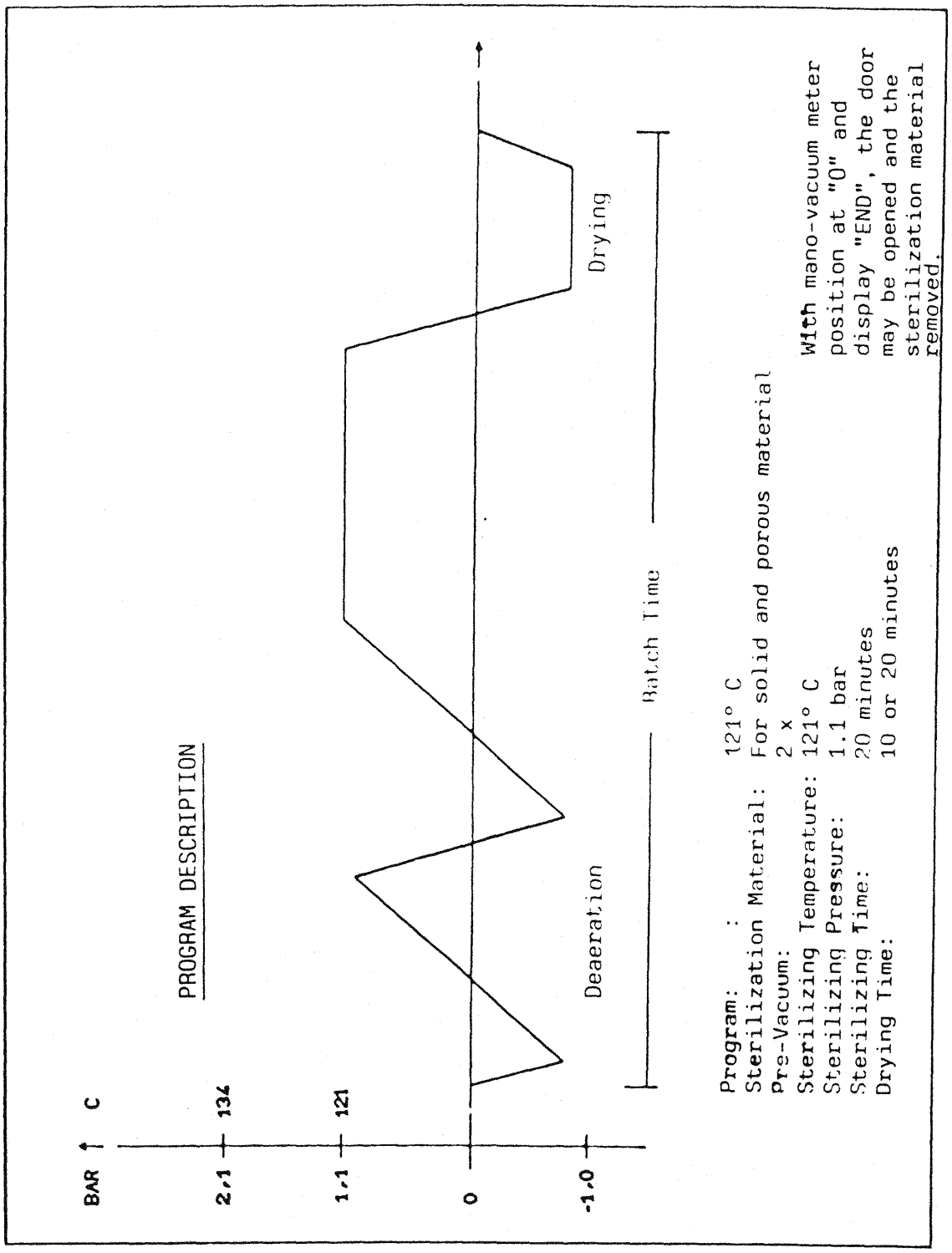
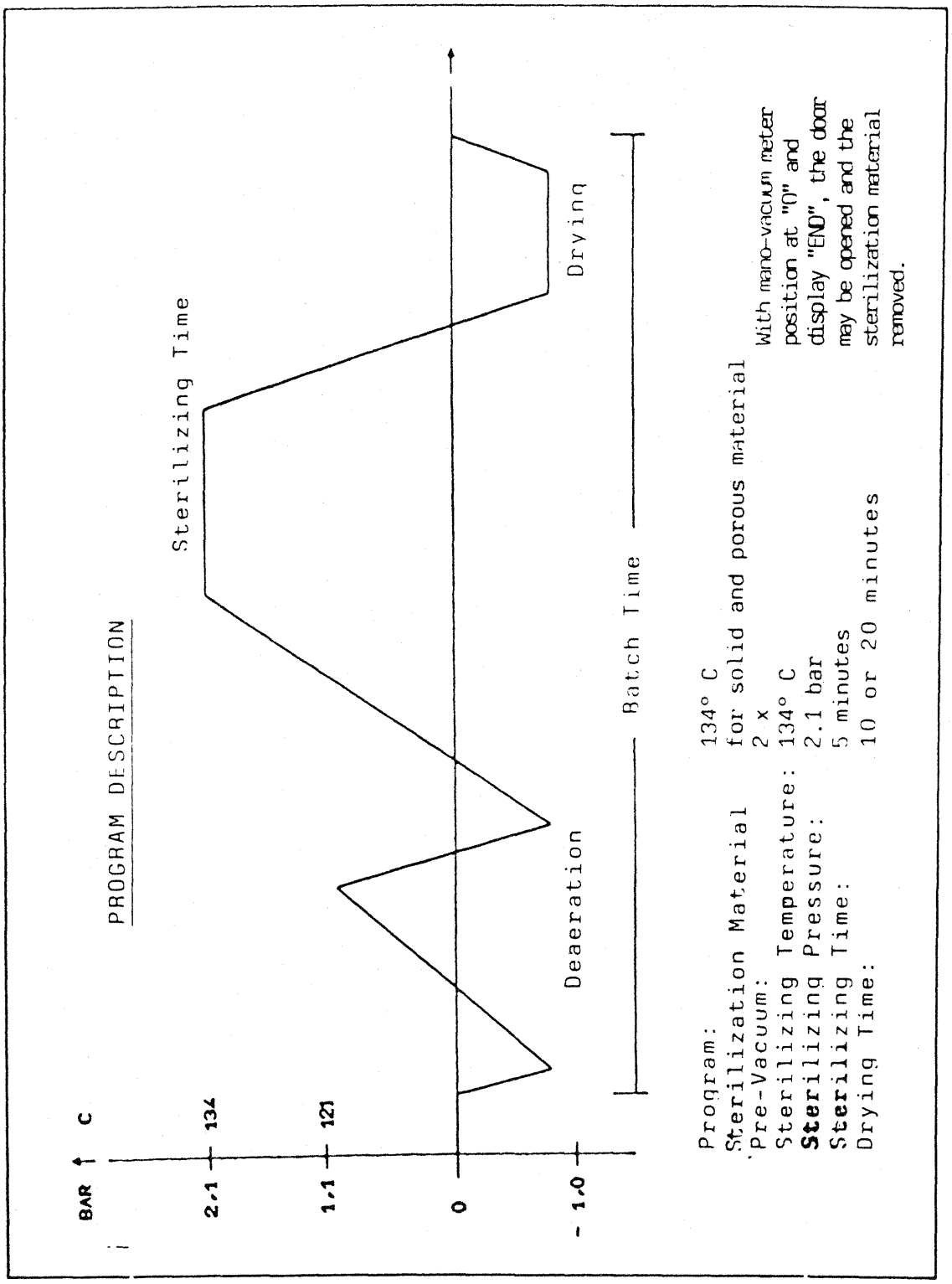


DIAGRAM 2
Program Description for a Sterilizing Temperature of 134° C



7. Starting

7.1 Initial Operation

1. The device must be installed on a flat surface. Biases may lead to interferences.

2. Connect the power-supply lead with the mains. Please check previously the type of mains and the fuse protection! (230 V / 50 Hz / 16 A - min. 10 A)

   CAUTION:
   The plug connection must be provided with a leading protective-conductor connection (shock-proof socket).

3. On the rear side of the device there are two connection possibilities for the accompanying connection hoses (Illustr. 2). At one of these connections (2/3), the water-tap - device connection is made. For this, the hose with two thread-ends is to be applied. The other connection (2/2) serves the device - drain connection (Illustr. 2/2). For this, the hose with the free end is to be applied.

4. Fill the feed-water supply device (1/4) with distilled or demineralized water up to the mark. Necessary amount: approx. 6 litres.

   NOTE:
   If the filling is too low, the lack-of-water display (1/11) illuminates. The device cannot be started.

   Due to the water separation, no return of the condensate takes place in the dental version of the device. Therefore, the available feed-water amount is only sufficient for one full sterilizing cycle. The lack-of-water display which illuminates during the filling after the 2nd evacuation phase, indicates that for the next sterilizing batch the feed-water supply device needs to be refilled again.
   To facilitate the work, we recommend the connection of a cartridge-demineralizer unit (see Item 10.6 Spare Parts, Accessories), by which the generation of the distilled water and the refilling of the feed-water supply is automatically controlled by means of the float switch (3/23).

7.2 Operation

7.2.1. Preparation for the Operation

- Check, whether enough distilled water is in the tank.
- Check, whether the device plug is in the socket.
- Check, whether the cooling-water hoses are properly connected.

7.2.2. Measures for Operation

1. Switch on the mains switch (1/9), slightly open the cooling-water tap.

2. Loading the device:

   The sterilization material is loaded into the useful space in cassettes or on perforated trays. Solid and porous material can be sterilized unpacked or in suitable packing for sterilization material.

   The sterilization of liquids or of substances being liquefied by heat is not permissible!

   Insert objects with cavities so that the condensate accumulating in these spaces can drain off.

   ATTENTION:

   Handpieces and bends and turbines can be sterilized, if they bear an according sign or have been admitted to sterilization by the manufacturers. The manufacturers' specifications have to be obeyed.

   If the manufacturers recommend the oil care prior to the sterilization, an oiling-up of the circulation water occurs. The water must therefore be controlled and exchanged regularly. Only emulsifying special-instrument oils may be applied for the care of the sterilization material. The application of bags made of sterilization paper clearly reduces the oiling-up of the circulation water.

   To avoid that the oil and other volatile substances enter the dosing apparatus from the sterilization material, a water separation takes place in the dental version (see Illustr. 3).

3. Lock the door tightly.
Upon audible clicking of the door-contact switch, turn on by approx. 3 rotations, until the door sits tightly.

4. Select drying time, 10 or 20 minutes.

5. Press Starting Key (1/13, 1/14) of the desired program. The diode on the key illuminates (GREEN). Thereby the program has started.

6. The curve sections on the program flowchart (1/15) illuminate according to the program section just running down. This makes it possible to follow the rundown. The remaining time is indicated on the digital display (1/12) in minutes.

7. Upon illumination of the entire curve, the "END" has been reached, and the device can be opened and unloaded.
After opening the door, the program is automatically reset, so that the device is immediately ready again for operation upon reloading.

7.2.3. Interrupting and Resetting the Program

If the already started program has to be interrupted (e.g. due to faulty loading), or if a program disruption occurs by a defect in the supply (e.g. mains-voltage loss), the device is to be reset to a defined basic-level state.

Switching off the mains switch and on again, and thereafter simultaneously pressing both selection keys for the drying time (1/10) for at least 5 sec., interrupts the current operating mode, and starts a short reset-program with:

- Opening a drainage- and deaeration valve for approx. 1 minute;
- Evacuating the useful space for approx. 1 minute;
- Pressure compensation via an aeration valve.

Thereafter, the device can be opened and a new operating cycle started.

7.2.4. Temporary Placing Out of Operation

After the last sterilization of the day:

- disrupt the cooling-water supply by turning off the water tap (to be provided by client);
- switch off the mains switch (1/9).

7.2.5. Placing Out of Operation during Standstill and for Transport

- Withdraw mains plug;
- Dismantle supply hoses for the cooling system and remove any remaining water;
- Open drain valve (1/7) by turning, and fully empty the feed-water supply device;
- Wipe dry the useful space;
- Clean and dry insertion rack, instrument trays and extraction grips if necessary, and store in useful space;
- Lock the useful-space door without pressing it on;
- Pack device and supply hoses.

7.2.6. Placing Out of Operation and Storage for a longer Period of Time

If it is intended to place the device out of operation for a longer period of time (more than approx. 2 weeks), we recommend to perform a drying run for the evacuation system, in order to prevent possible corrosion damage.

- Prior to performing the measures according to Item 7.2.5.:

- Open the door when the device is ready for operation;

- Screw in the tool for actuating the door switch (Art.No 1 1120 2877, obtainable as accessory) up to an audible clicking sound;

- Switch on the mains switch (1/9);

- Operate starting key (1/13) of the 121 °C program - the vacuum pump starts running;

- Switch off the device after approx. 20 minutes on the mains switch (1/9), and turn out again the tool for actuating the door switch;

- Continue according to Item 7.2.5.

8. Preparation of the Sterilization Material

Disinfection of the Material p r i o r t o Sterilization:

Due to the heat during the sterilization, residues on instruments, syringes and accessories are burned in, and contaminate the material, the boiler and the supply water.

Therefore clean the instruments thoroughly after usage, and add to the cleaning water a proven, bactericidal detergent.

Rinse and dry intensely after the cleaning, if possible with hot water, so that also residues of the detergent and the rinsing water are eliminated.

Packing:

Only instrument trays and cassettes of aluminium with perforations in the lid and the bottom may be used.

If instruments are sterilized unpacked on perforated trays or in cassettes, it is practical for better drying to use sheets of crepe- or filter paper as bottom layers.

Gauze- or pulp sheets are unsuitable !!!

For single packing and sterile stockage, bags of sterilization paper according to DIN 58 953 *) Part 3, or of transparent-sterilization packing (paper and foil) according to DIN 58 953 *), Part 4, are to be applied.

ATTENTION:
Foil-bags or -tubes are not suited as sterilization packing, and should in any case be avoided or only used subsequently as storage packing !!!

The suitability of the various types of packing, being dependent on the sterilization material, is predetermined for the Fractionated Vacuum Method (FRVM) used here, in excerpts in Table 1 according to DIN 58 946 *) Part 5.

*) DIN = German Industrial Standard

Table 1: Applicability of standardized Steam-Sterilization Methods in dependence on Sterilization Material and Type of Packing.

(pursuant to DIN 58 946, Part 5)

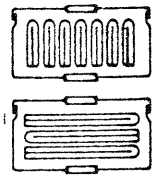
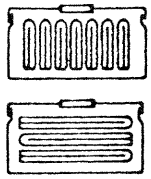
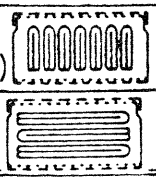
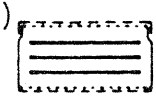
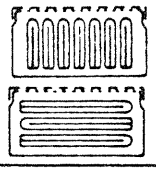
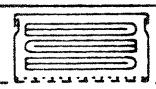
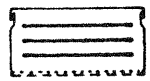
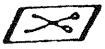
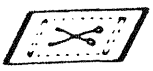
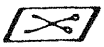
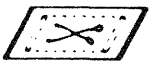
Type and Packing of the Sterilization Material		Symbolic Notation + Packing Position	Steam Sterilization Method acc. to DIN 58 946, Part 1		
			Gravitational Method GRAV	Pre-Vacuum Method PRVM	Fractionat Vacuum Method FRVM
Solid and porous Sterilization Material and Rubber Articles packed	Textiles in sterilizing cases with valves on the lid and at the bottom (acc. to DIN 58 952, (1)		-	o	+
	Textiles in sterilizing cases with valve in the lid (StB-V) (acc. to DIN 58 952 (1)		-	-	+
	Textiles in sterilizing cases with filter (StB-F) (acc. to DIN 58 952 (1) perforated lid and bottom		+	+	+
			o	+	+
	Instruments in sterilizing cases with filter (StB-F) (acc. to DIN 58 952 (1), perforated lid and bottom		+	+	+
	Textiles in sterilizing cases with filter (StB-F) (acc. to DIN 58 952 (1), perforated lid		-	-	+
	Textiles in sterilizing cases with filter (StB-F) (acc. to DIN 58 952 (1), perforated bottom		o	+	+
			-	+	+
	Instruments in sterilizing cases with filter in the bottom (StB-F) (acc. to DIN 58 952 (1) lid not perforated		+	+	+

Table 1 (Cont'd) :

Type and Packing of the Sterilization Material		Symbolic Notation + Packing Position	Steam Sterilization Method acc. to DIN 58 946, Part 1		
			Gravitational Method GRAV	Pre-Vacuum Method PRVM	Fractionated Vacuum Method FRVM
Solid and porous Sterilization Material and Rubber Articles packed	non-perforated receptacles		-	-	o
	Sterilization paper acc. to DIN 58 953, Part 5, single-packed		+	+	+
	Sterilization paper acc. to DIN 58 953, Part 5, double-packed		o	+	+
	Transparent-sterilization packing, single, acc. to DIN 58 953, (4)		o	+	+
	Transparent-sterilization packing, double, acc. to DIN 58 953, (4)		o	o	+
	Polyamide foil [3]) (PA 6 or PA 66), acc. to DIN 16 773, Part 1, 0.05 mm thick, Sterilization-material-single packing, sealed		-	-	o
	Polyamide foil [3]) (PA 6 or PA 66), acc. to DIN 16 773, Part 1, 0.05 mm thick, Sterilization-material-double packing, sealed		-	-	-
Liquid Sterilization Material [2])	Glass receptacles and plastic receptacles, not or tightly sealed		-	-	-

\+ applicable o conditionally applicable (further details are contained in the operating instructions of the manufacturers)

\- not applicable

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[2]) Small-size sterilizers according to this standard are not equipped with the safety devices required for the sterilization of liquids.

[3]) An identification of the foil has to be performed by the manufacturers.

Note:
Maximum loading of the cassettes with textiles: 1,200 g
Maximum loading with instruments: 1,100 g

9. Functional Control

General

1. The Automat 35 has to be tested for the efficacy of the sterilization procedures by

   - Biological Indicators pursuant to DIN 58 946, Part 4, and
   - Chemo-Process Indicators for steam sterilizers.

2. The tests are based on

   the DIN 58 946, Part 8:
   - Steam Sterilizers
   - Small-Size Sterilizers
   - Efficacy Test

3. Tests are to be performed

   - Initial-operation test prior to the first application or when taking over the device;
   - Periodical test at intervals of 6 months with the device being in use;
   - Unscheduled test following repairs or after the replacement of parts which might affect the sterilizing performance;
   - Unscheduled test when an insufficient sterilizing performance is suspected

4. The tests and the results are to be documented.

Performance

Each sterilizing program of the sterilizer has to be tested. The test is to be performed with biological indicators pursuant to DIN 58 946, Part 4. For the test, sterilization material and sterilization packing have to be used which correspond with the respective purpose of the sterilizing program.

'Instruments' Program

- the biological indicators are packed into paper bags or sealed into transparent-sterilization packing individually, together with the instruments.

- distribute the indicators thus packed onto the four loaded instrument trays.

- Maximum loading for instruments: 1,100 g

'Laundry' Program

- For the test, smooth and folded cloths have to be used. New cloths must be washed prior to application.

- Remove the insertion rack from the useful space.

- Sterilizing cassettes have to be used for packing the cloths.

- Fold the cloths so that they can be packed vertically into the sterilizing cassette (approx. 180 x 150 mm).

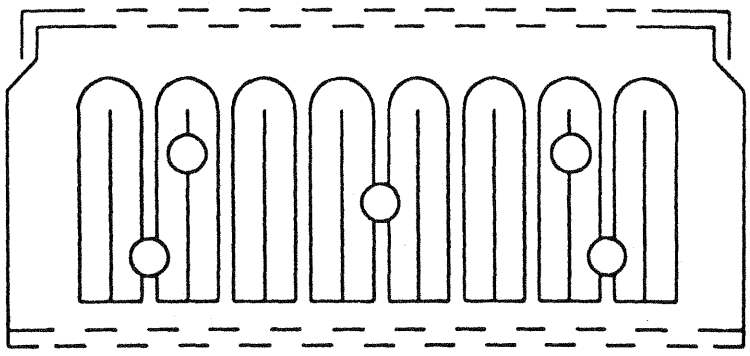
- Alternatively, also wire baskets could be applied, into which the cloths can be placed in the form of a package being wrapped into sterilization paper.

- Distribute 5 biological indicators in the laundry package according to Illustr. 4.

- Maximum loading for textiles: 1,200 g

Illustration 4

Laundry Package in Sterilizing Cassette



10. Care, Maintenance and Periodic Works

10.1 General

In order to maintain the readiness of application of the device, regular care- & maintenance works are necessary. They are to be performed by the operator/ user or by the instructed device attendant.

Repairs on the device are only to be performed by the manufacturers or a service department authorized by WEBECO GmbH!

We further refer to the obligations of the operating company pursuant to DIN 58 946, Part 5, Annex A 4 (Recurrent Tests) and A 5 (Tests in Special Cases).

10.2 Periodic Schedule

Serial No	Test Location /Description	Test / Activity	Reference	Term of the work
1	Chamber Floor Insertion Rack Instrument Trays	Cleaning by user/device attendant	according to Chapter 10.3	weekly
2	Feed-Water Supply Device	Replace distilled water by user	according to Chapter 10.4	after 30 sterili-zations or weekly
3	Threaded bolt on the turning lock	grease by user / device attendant	acc.to Chapter 10.4	weekly
4	Aeration Filter	exchange by manufact-urers or by authorized service dept.	acc. to Chapter 10.5	yearly
5	Useful-Space Door	exchange seal by user / device attendant	acc. to Chapter 10.5	as required
6	Supply Device	clean by user / device attendant	acc. to Chapter 10.4	as required
7	Entire Device	Test concer-ning safety regulations by manufacturers or authorized service dept.	acc. to Chapter 10.1	as required
8	Entire Device	Major Overhaul by manufacturers or authorized service dept.		every 5 years

10.3 Care Works

Wipe useful space out moistly and rub dry. Clean inserted rack and instrument trays with wetting-agent solution, and subsequently rinse with clear water and rub dry.

10.4 Maintenance Works

1. Replace distilled water:

   Empty the fresh-water supply device by turning the drain valve (Illustr. 1/7). Thereafter fill up again to the mark with distilled or demineralized water (approx. 6 litres).

   If it is found that there are impurities in the supply device, then a cleaning has to be performed prior to refilling.

   Depending on the type of the residues, a detergent or a fat-dissolving agent has to be applied which can be eliminated again by intensive rinsing.

   CAUTION:
   Make the device currentless prior to any cleaning works.

2. Grease the threaded bolt on the turn lock.

   Remove old grease residues from the threaded bolt, and then rub in the threaded bolt with high melting-point grease.

10.5 Repair Work

1. Exchange aeration filter

CAUTION:
- Withdraw mains plug prior to starting the work.
- Loosen the rear wall.
- Remove the fixing screws on both sides of the casing, and lift up the casing.
- Pull off the filter and replace it by a new one.
- Fasten casing and rear wall again.

NOTE:
The filter is located on the right in the back of the device, hanging on a hose.

2. Exchange door sealing

Remove door sealing from the groove on the inner side of the door.
Carefully remove any larger adhesive residues.

ATTENTION:
It has to be paid attention that the inner side of the door and the support of the door sealing (lining groove) are not damaged.

Spread silicone adhesive (e.g. Wacker, Elastosil E 41) thinly and evenly onto the support on the inner side of the door in the base of the groove.

Fit new door sealing into the support, and press on the door slightly by aid of the locking bolt. Allow the adhesive to bind.

ATTENTION:
Slip adhesives may not be applied.

10.6 Spare Parts, Accessories

The following spare parts and accessories are available via the manufacturers or an authorized service department:

Article:		Article No:
Aeration Filter		5 2021 6001
Door Sealing		5 5405 3502
Tool for operating the Door Switch		1 1120 2877
Inserted Rack, double and quadruple		1 1113 8480
Instrument Tray, Alu	35x18x 3 cm	1 0901 3518
Tray Cassette, Alu	28x19x 4 cm	1 5928 1904
Tray Bowl, Alu	28x19x 3 cm	1 5901 2819
Sterilizing Cassette, Alu	35x18x18 cm	1 0935 1818
Sterilizing Cassette, Alu	35x18x 5 cm	1 0935 1805
Sterilizing Basket, stainless	35x18x 8 cm	1 5904 3501
Sterilizing Basket, stainless	35x18x18 cm	1 5904 3502
Cartridge Demineralizer "Formula 2000"		5 5302 2000

(Short-Form Operating Instructions
on the front of the Device):

Load Chamber, Lock Door Tightly, Switch On Mains Switch.

Program Selection:	Press the appurtenant program key. Select drying time B or C, as required.
Program I:	120 °C (Pressure a = 1.1 bar) for rubber and textiles
Program II:	134 °C (Pressure a = 2.2 bar) for syringes, instruments and textiles

Program runs down automatically. Open door only when the manometer position is -0-

In case of emergency switch off mains switch.

When display "A" blinks: "Lack of Water"
Fill up with water.

When the curve line is fully illuminated, the rundown has taken place orderly.

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>>> S T U E C K L I S T E <<<

Pos-F	Teilenr/AG	Ko	Menge/V	E	MA	Benennung/Werkstoff	
-	1 1120 1666	-00	1,000			ROHRPLAN A35 KPL	
letzte Änder.:18.03.93				STK		Piping Plan A 35	compare side 7 - No.
001-0 00	1 1120 1658	-00	1,000	STK		KONDENSGEFÄSS KPL. A35	Feed-water device 21
003-0 00	1 1120 1664	-00	1,000	STK		KÜHLER KPL. A35	condenser 24
004-0 00	1 1120 1602	-00	1,000	STK		ABLASSVENTIL A35	drain valve
005-0 00	1 1111 5471	-00	1,000	STK		RÜCKSCHLAGVENTIL KPL F/L SCHLIESSBOLZEN	check valve 25
006-0 00	1 1111 2470	-00	1,000	STK		BELÜFTUNGSFILTER KPL.	Bacterial filter for aeration 16
007-0 00	5 1740 0031	-00	1,000	STK		VAK-PUMPE-PJ-5673-726 230V/50HZ IP20 M.DECKEL	Vacuum pump 29
008-0 00	5 1816 3143	-00	1,000	STK		VAKUUMMANOMETER -1/+3 BAR DM63;ROT2,5; GRÜN 2,1-2,3	mano-vacuumeter 13
009-0 00	5 1922 7165	-00	1,000	STK		FERNTHERMOMET. 8201-21-60 0-160°C BNR.82001835	tele-thermometer 12
010-0 00	1 1120 1867	-00	1,000	STK		ROHRLEITUNGEN A35	piping
011-0 00	5 0131 0631	-00	1,000	STK		MAGNETVENTIL 256-A-6-F-G1/4-230/50	solenoid valve press.decrease 10
012-0 00	5 0120 4131	-00	1,000	STK		MV I129-D1-1/4"3-Z224-230 50 2/2 WEGE 140C D.DUTRAL	solenoid valve aeration 15
013-0 00	5 0131 0631	-00	1,000	STK		MAGNETVENTIL 256-A-6-F-G1/4-230/50	solenoid valve cooling 26
014-0 00	5 0141 3163	-00	1,000	STK		MAGNETVENTIL TYP 3163 3-WEGE CV-25-HT196 230/50	solenoid valve aeration vacuum pump 28
015-0 00	5 0141 2163	-00	1,000	STK		MAGNETVENTIL TYP 2163 2-WEGE DV-25-HT196-230/50	solenoid valve feeding chamber 17
016-0 00	6 6408 0003	-00	2,000	STK		DRUCKSCHALTER FEMA DCM 3 46580	pressure regulator 18 1.1 and 2.2 bar 19
017-0 00	6 6408 0111	-00	1,000	STK		VAKUUMSCHALTER VCM 111 46715	vacuum regulator 20
019-0 00	5 0525 1525	-00	1,000	STK		SICHERHEITS-VENTIL 6105.1-G1/2-2,5	safety valve 19
021-0 00	2 0120 3114	-00	1,000	STK		DOPPELNIPPEL DÜSE D/I MS58 6KT 19X28 1/4X1/4	double nipple for nozzle

STL-NR.: 1 1120 1666 -00 DATUM: 10.03.94 Bearb: HEJ

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>>> S T U E C K L I S T E <<<

Pos-F	Teilenr/AG	Ko	Menge/V	E	MA	Benennung/Werkstoff	
-	1 1120 1666	-00	1,000			ROHRPLAN A35 KPL	
letzte Änder.:18.03.93				STK			
022-0 00	5 2211 0500	-00	1,000	STK		MECO-DUESE-GR--50-NR-4652	nozzle streaming
025-0 00	5 4314 0665	-00	2,000	STK		SCHWENKVERSCHRAUBUNG MS 1521-6/4-1/4	screwing
026-0 00	5 4313 0664	-00	1,000	STK		EINSCHRAUBVERSCHRAUBUNG MS 1511-6/4-1/4	screwing
028-0 00	5 3630 1001	-00	2,000	STK		T-VERSCHRAUBUNG MS 1210-4	screwing
037-0 00	4 0431 7010	-00	1,000	STK		ROHRMUTTER DIN431 MS G1/4 6KT 22X6	nut
041-0 00	2 0120 3035	-00	1,000	STK		ANSCHLUSS F. DRUCKR. D/L MS58 6KT 27X50	plug for printer
042-0 00	5 4312 1686	-00	3,000	STK		VERSCHRAUBUNG IG MS 1463-8/6-1/4	screwing
043-0 00	4 0431 7030	-00	4,000	STK		ROHRMUTTER DIN431 MS G1/2 6KT 27X8	nut
044-0 00	2 0111 6270	-00	1,000	STK		REDUZIERNIPPEL D/L MS58 6KT 27X32 1/4-1/2 I	reducing nipple
046-0 00	5 3630 1303	-00	10,000	STK		ÜBERWURFMUTTER MS 1303 8-1/4	nut
048-0 00	5 3630 0105	-00	11,000	STK		EINSCHRAUBVERSCHRAUBUNG MS 1051 8-1/4	screwing
049-0 00	5 3632 0013	-00	1,000	STK		WINKEL VN IA A=KONISCH MS 2020-1/4	angle
051-0 00	5 3630 1403	-00	10,000	STK		KLEMMRING MS 1310-8	ring
067-0 00	5 3630 0405	-00	3,000	STK		WINKELVERSCHRAUBUNG IG MS 1093 8-1/4	screwing
068-0 00	2 0120 2385	-00	1,000	STK		DOPPELNIPPEL D/I MS58 6KT 27X50 IK3/4-3/8I	double nipple
069-0 00	5 3630 0006	-00	1,000	STK		EINSCHRAUBVERSCHRAUBUNG MS 1050 8-3/8	screwing
070-0 00	5 3632 0083	-00	1,000	STK		T-VERSCHRAUBUNG MS 2003 -G 3/8	screwing
071-0 00	5 3491 7010	-00	1,000	STK		STOPFEN RG G3/8 3290	cap

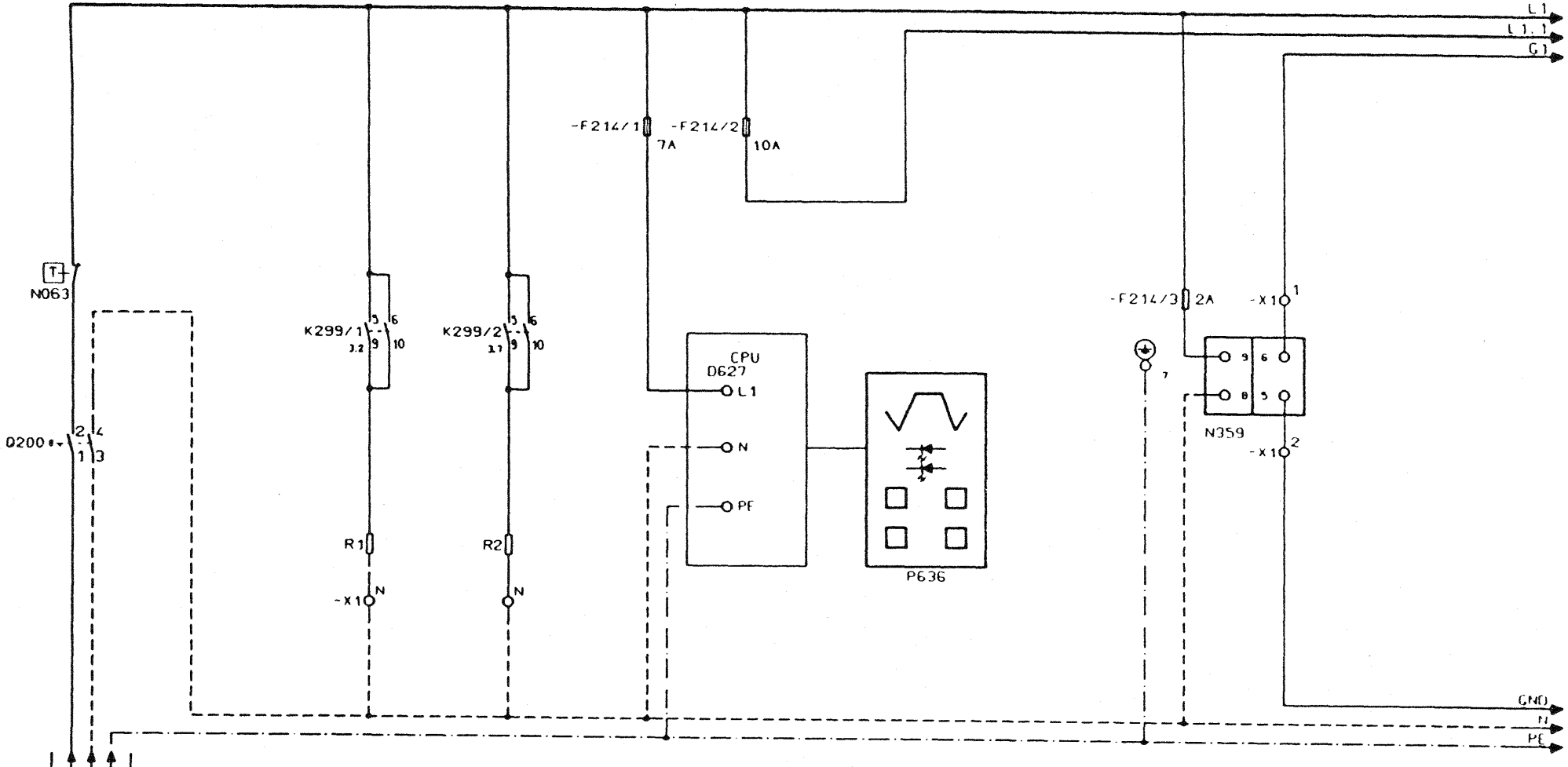
STL-NR.: 1 1120 1666 -00 DATUM: 10.03.94 Bearb: HE

WEBECO GMBH

>>> S T U E C K L I S T E <<<

Pos-F	Teilenr/AG	Ko	Menge/V	E	MA	Benennung/Werkstoff	
-	1 1120 1666	-00	1,000			ROHRPLAN A35 KPL	
letzte Änder.:18.03.93				STK			
072-0	4 0431 7021	-00	1,000			ROHRMUTTER DIN431 MS G3/8	nut
00				STK		6KT 27X7	
073-0	5 3171 0060	-00	1,000			WINKEL RG 90' 3090 G1/4	angle
00				STK		I/I	
074-0	5 3630 0604	-00	1,000			T-VERSCHRAUBUNG	screwing
00				STK		MS 1010 8-1/8	
075-0	2 0109 9321	-00	1,000			ÜBERWURFMUTTER G1/4 D/L	nut
00				STK		CUZN35NIF50 6KT 19X13	
076-0	2 0120 1154	-00	1,000			HÜLSE D/L	socket
00				STK		1.4305 RD.11X13	
077-0	5 3630 1401	-00	1,000			KLEMMRING	ring
00				STK		MS 1310-4	
078-0	5 3630 1301	-00	1,000			ÜBERWURFMUTTER	nut
00				STK		MS 1303 4-1/8	
080-0	5 3630 1003	-00	1,000			T-VERSCHRAUBUNG	screwing
00				STK		MS 1210-8	
081-0	5 3630 0201	-00	1,000			VERSCHRAUBUNG IG	screwing
00				STK		MS 1063 4-1/8	
082-0	5 0141 9051	-00	3,000			REDUZIERNIPPEL 2531	reducing nipple
00				STK		G 1/4 - 1/8 A/I	
083-0	1 1120 2127	-00	1,000			DOPPELNIPPEL M. DÜSE A3!	double nipple with nozzle for cooling wa
00				STK			
084-0	4 0431 7010	-00	2,000			ROHRMUTTER DIN431 MS G1/4	nut
00				STK		6KT 22X6	
085-0	5 3630 0101	-00	3,000			EINSCHRAUBVERSCHRAUBUNG	screwing
00				STK		MS 1051 4-1/8	
088-0	5 5904 0010	-00	4,000			METALASTIK 11MN60 521809.	rubber to metal eleme for vacuum pump
00				STK		GEKÜRZT 1MAL M6X10	
089-0	D0934R6	-00	4,000			MUTTER DIN 934 A2 M6	nut
00				STK			
090-0	D0125R6,4	-00	4,000			SCHEIBE DIN 125 A2 6,4	disc
00				STK			

STL-NR.: 1 1120 1666 -00 DATUM: 10.03.94 Bearb: HE



EINSPEISUNG – Mains
220V/50Hz
SCHUKOSTECKER
I = 10A
P = 2200W

Immersion Heating element
TAUCH HEIZUNG
1200W

Outer Heating
UNTERHEIZUNG GEREGELT
850W

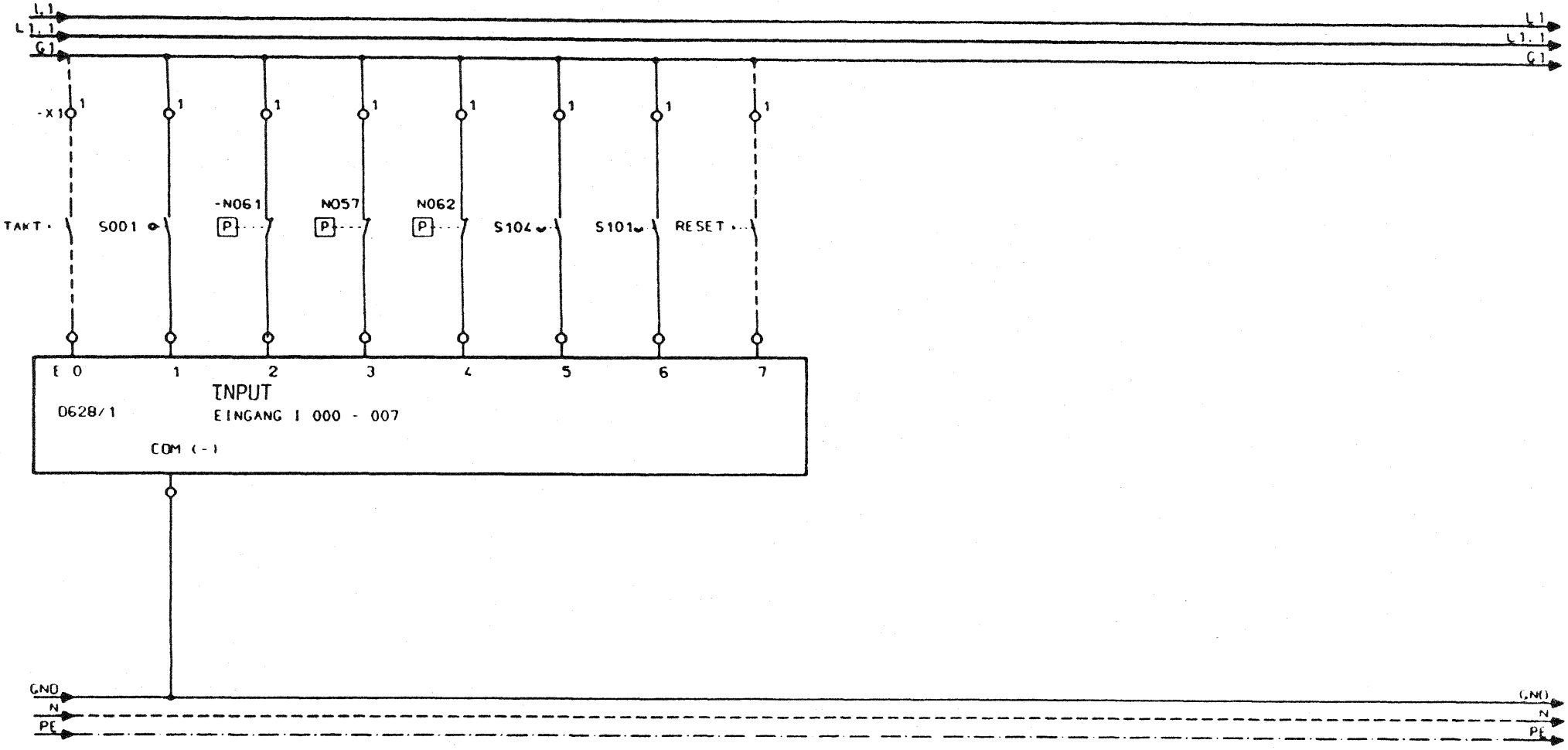
CPU MODULE

LED DISPLAY

Voltage stabilizer
24 V
STABILISIERUNG

1 2 3 4 5 6 7 8

					Datum	05.02.93	Kommentar	Projekt	WEBECO GmbH	Zeich.Nr. 1 1120 0936
	10.08.92				Bearb.	QAMMAST	A35 STANDARD 1	A35STAND_1	Bad Schwartau	= A35
Zust.	Änderung	Datum	Name	Norm	Copr.	BOEBS	Urspr. 18.04.91	Erst.	Erst.	= SCHRANK
										Blatt 1



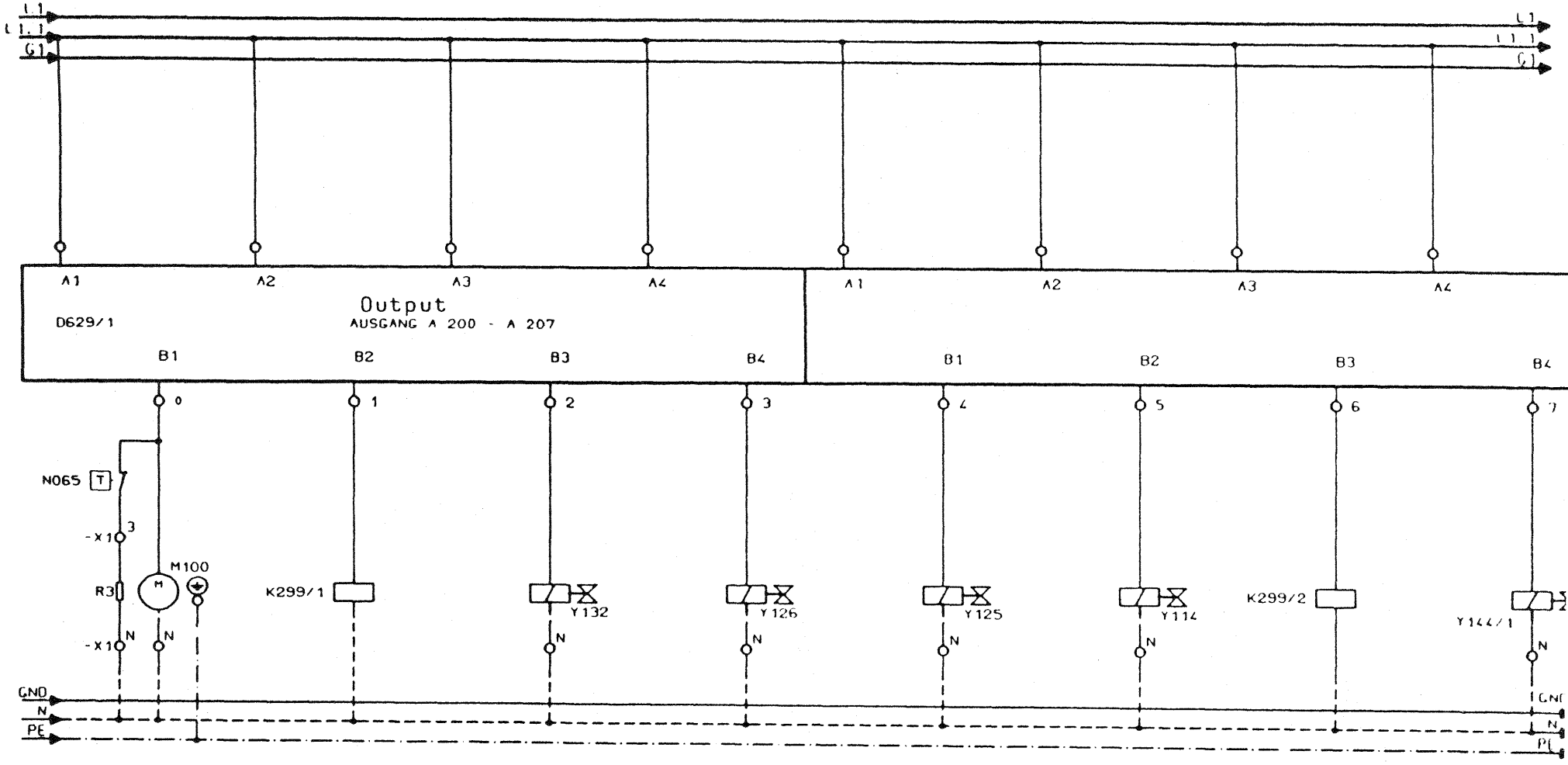
KD TAKT	TUER KONTAKT	VAKUUM REGLER	DRUCK REGLER	DRUCK REGLER	DOSIERUNG KAMMER	WASSER MANGEL	RESET
	door contact switch	200 MBAR	2,2 BAR press. regulator	1,1 BAR press. regulator		VE-WASSER deficient dem. water	

vacuum regulator

feeding device chamber

1 2 3 4 5 6 7 8

						Datum	05.02.93	Kommentar	A35 STANDARD	Projekt	A35STAND_1	WEBECO GmbH Bad Schwartau	Zeich.Nr.	1 1120 0936	= A35
	22.09.92					Bearb.	DAMMAST								+ SCHRANK
						Gepr.	BOEBS								Blatt 2
Zust.	Änderung	Datum	Name	Norm		Urspr.	18.04.91	Ers. f.		Ers. d.					



				Datum	05.02.93	Kommentar	A35 STANDARD	Projekt	A35STAND_1	WEBECO GmbH	Zeich.Nr. 1 1120 0936
	05.02.93			Bearb.	DAMMAST					Bad Schwartau	= A35
				Copr.	BOLDS						+ SCHRANK
Zust.	Aenderung	Datum	Name	Norm		Urspr. 18.04.91	Ers.f	Ers.d			Blatt 1

Pos-F	Teilenr/AG	KO	Menge/V	E	MA	Benennung/Werkstoff	Znr-F/L	Ch	T	BS	DA	A
-	1 1120 3326	-00	1,000			E-MONTAGEPLATTE A35						
letzte Änder.:20.10.93			STK			STANDARD 1		0	B	A	N	3
002-0	2 0120 2929	-00	1,000			E-MONTAGEPLATTE A35	01					3
00			STK			AL99,5 HH BL.3X303X480		0	E	A	B	1
007-0	6 4252 0390	-00	7,000			SCHNAPPSCHILD-PESO-6/15						
00			STK			2039.0		0	E	A	B	1
008-0	6 4252 9590	-00	2,000			SCHRAUBE FKSC M5X8						
00			STK			2959.0		0	E	A	B	1
040-0	6 4250 0001	-00	1,000			KLEMMENBEZEICHNUNG 1						
00			STK			GW 5226.6		0	E	A	B	0
041-0	6 4250 0002	-00	1,000			KLEMMENBEZEICHNUNG 2						
00			STK			GW 5226.6		0	E	A	B	0
042-0	6 4250 0003	-00	1,000			KLEMMENBEZEICHNUNG 3						
00			STK			GW 5226.6		0	E	A	B	0
043-0	6 4250 1102	-00	1,000			KLEMMENBEZEICHNUNG N						
00			STK			GW 5227.6		0	E	A	B	0
044-0	6 4250 1101	-00	1,000			KLEMMENBEZEICHNUNG PE						
00			STK			GW 5372.6		0	E	A	B	0
050-0	6 4105 0075	-00	50,000			ADERENDHÜLSEN 0,75 ISOLI.						
00			STK			WEISS		0	E	A	B	0
051-0	6 4105 0050	-00	20,000			ADERENDHÜLSEN 0,5 ISOLI.						
00			STK			ORANGE		0	E	A	B	0
055-0	6 4108 2140	-00	4,000			RINGKABELSCHUH RA4						
00			STK			NR.5500665		0	E	A	B	0
057-0	6 4111 3735	-00	10,000			WINKEL-STECKHÜLSE 3735						
00			STK			MS VZ BNR. 5590100		0	E	A	B	0
058-0	6 4104 2790	-00	10,000			ISOL.HÜLSE F.WINKELSTÜCK						
00			STK			2790 BNR. 5590100		0	E	A	B	0
061-0	6 4105 7007	-00	15,000			ADERENDHÜLSE 0,75						
00			STK			VPE-1000 55002020		0	E	A	B	0
063-0	6 4251 9150	-00	1,000			QUERVERBINDER QL3						
00			STK			1915.0		0	B	A	B	0
110-0	1 1114 3490	-00	1,000			ERDUNGSSCHRAUBE KPL.	01					4
00			STK					0	T	A	B	0
214-0	6 4252 4892	-00	3,000			WEIDM-KLEMME-SAK S 3						
00			STK			2489.2		0	E	A	B	0
239-0	6 4254 3846	-00	4,000			KLEMME DK4Q						
00			STK			5900.6		0	E	A	B	0

Pos-F	Teilenr/AG	Ko	Menge/V	E	MA	Benennung/Werkstoff	Zhr-F/E	CH	T	BS	DA	A
-	1 1120 3326 -00		1,000			E-MONTAGEPLATTE A35						
letzte Änder.:20.10.93			STK			STANDARD 1		0	B	A	EF	N 3
240-0	6 4263 9716 -00		2,000			ABSCHLUSSPLATTE						
00			STK			13971.6		0	E	A	FB	B 0
250-0	6 4251 2890 -00		2,000			WEIDM-BEFEST-SCHRB-BSK						
00			STK			1289.0		0	E	A	FB	B 0
252-0	6 4254 7346 -00		7,000			BEZEICHNUNG 5FW						
00			STK			WEIDMÜLLER		0	E	A	EF	B 2
260-0	2 0120 3139 -00		1,000			TRAGSCHIENE A 35						4
00			STK			TS32X135		0	E	A	EF	B 0
261-0	2 0120 3142 -00		1,000			TRAGSCHIENE A 35						4
00			STK			TS35X60		0	E	A	EF	B 0
273-0	6 4252 9390 -00		1,000			WEIDM-SICHERUNG-10A						
00			STK			2939.0		0	E	A	FB	B 0
275-0	6 4252 9450 -00		1,000			WEIDM-SICHERUNG- 2A						
00			STK			2945.0		0	E	A	FB	B 0
276-0	6 4252 9580 -00		1,000			WEIDM-SICHERUNG- 7A						
00			STK			2958.0		0	E	A	FB	B 0
299-0	6 5910 0021 -00		2,000			RELAIS RH2B U AC 230V						
00			STK					0	E	A	FB	B 0
359-0	6 6505 6001 -00		1,000			NETZGERÄT 4ANI-80 I,AUFB.						
00			STK			230/24V=		0	E	A	FB	B 0
392-0	6 4254 3848 -00		4,000			KLEMME DK4Q						
00			STK			5900.8		0	E	A	FB	B 0
422-0	6 5910 0250 -00		2,000			IZUMI-SOCKEL-SH-2B-05-U						
00			STK					0	E	A	FB	B 0
447-0	6 4104 3163 -00		13,000			FLACHSTECKERHÜLSE RA63						
00			STK			6,3X0,8 NR.5500774		0	E	A	FB	B 1
449-0	6 4105 0250 -00		2,000			ADERENDHÜLSEN 2,5 ISOLI.						
00			STK			BLAU		0	E	A	FB	B 0
468-0	6 4207 0202 -00		4,000			HALTEKLAMMER SFA-202						
00			STK			FÜR SYS2-05		0	E	A	FB	B 1
490-0	6 4252 7962 -00		1,000			WEIDM-KLEMME-SAK-2,5KRG						
00			STK			2796.2		0	E	A	FB	B 0
514-0	6 3104 0009 -00		1,000			BLINDSTOPFEN PG9						
00			STK			ISO GRAU		0	E	A	FB	B 0
523-0	6 8101 0090 -00		1,000			KUNSTST-SPIRALSCHLAUCH						
00			M			D-9 561959		0	E	A	FB	B 0

Pos-P	Teilenr/AG	Ko	Menge/V	E	MA	Benennung/Werkstoff	Zhf-Pfl	Ch	T	BS	DA	A
-	1 1120 3326	-00	1,000			E-MONTAGEPLATTE A35						
letzte Änder.:20.10.93			STK			STANDARD 1	0	B	A	EF	M	3
534-0	6 4254 7436	-00	6,000			WEIDM-KLEMME-EK2,5N-GGB						
00			STK			4743.6	0	E	A	FB	B	0
536-0	6 4253 4620	-00	3,000			BEFEST.SCHRAUBE BS 3X6						
00			STK			3462.0	0	E	A	FB	B	1
538-0	6 4253 6860	-00	2,000			WEIDM-QUERVERBIND-Q10						
00			STK			3686.0	0	E	A	FB	B	0
541-0	6 4251 9132	-00	1,000			WEIDM-ABSCHL-PLA-APKRG						
00			STK			1913.2	0	E	A	FB	B	0
607-0	6 2701 0071	-00	8,000			VERDRAHTUNGSLEITUNG						
00			M			H05V-K 0,75 SCHWARZ	0	E	A	FB	B	0
608-0	6 2701 0073	-00	8,000			VERDRAHTUNGSLEITUNG						
00			M			H05V-K 0,75 BLAU	0	E	A	FB	B	0
609-0	6 2703 0151	-00	3,400			VERDRAHTUNGSLEITUNG						
00			M			H07V-K 1,5 SCHWARZ	0	E	A	FB	B	0
613-0	6 2703 0153	-00	1,250			VERDRAHTUNGSLEITUNG						
00			M			H07V-K 1,5 BLAU	0	E	A	FB	B	0
627-0	6 6703 0001	-00	1,000			SPS FA-1J GRUNDGERÄT AC						
00			STK			PFJ-CR1E	0	E	A	FB	B	0
628-0	6 6703 0002	-00	1,000			SPS FA-1J8-EINGANGSMO.PNP						
00			STK			PFJ-N082	0	E	A	FB	B	0
629-0	6 6703 0003	-00	1,000			SPS FA-1J 8 AUSG.RELAIS						
00			STK			PFJ-T081	0	E	A	FB	B	0
632-0	6 6703 0006	-00	1,000			SPEICHERMODUL 4K EPROM						
00			STK			PFA-1M34	0	E	A	FB	B	0
650-0	6 3303 3015	-00	1,200			KABELKANAL LK4 30015						
00			M			30 X 15 MM	0	E	A	FB	B	0
681-0	6 2201 1707	-00	0,800			KABEL SIHF-J 7X0,75						
00			M				0	E	A	FB	B	0
689-0	6 2701 0076	-00	8,000			VERDRAHTUNGSLEITUNG						
00			M			H05V-K 0,75 GELB/GRUEN	0	E	A	FB	B	0
690-0	6 2704 0256	-00	1,800			VERDRAHTUNGSLEITUNG						
00			M			H07V-K 2,5 GRUEN/GELB	0	E	A	FB	B	1
692-0	6 2700 0057	-00	2,300			VERDRAHTUNGSLEITUNG						
00			M			H05V-K 0,5 ROT	0	E	A	FB	B	0
698-0	6 2700 0059	-00	1,100			VERDRAHTUNGSLEITUNG						
00			M			H05V-K 0,5 VIOLETT	0	E	A	FB	B	0

Pos-F	Teilenr/AG	Ko	Menge/V	E	MA	Benennung/Werkstoff	Znr-F/L	CH	T	BS	DA	A
-	1 1120 3327	-00	1,000	STK		E-GERATEINSTALLATION A35						
letzte Änder.:20.10.93						STANDARD 1		0	B	A	EF	N 2
001-0	6 5503 0001	-00	1,000	STK		SCHALTER MIKRO CT2-A2						
00						B.NR. 9001895		0	E	A	FB	B 0
010-0	D0084R4X16	-00	1,000	STK		SCHRAUBE DIN 84 A2 M4X16						
00								0	N	A	FB	N 0
011-0	D6797R4,3I	-00	1,000	STK		ZAHNSCHEIBE D6797 A2 4,3I						
00								0	N	A	FB	N 0
012-0	2 9106 0600	-00	1,000	STK		ERDUNGSSCHILD M4	606					
00						BNR.1505854		0	E	A	FB	B 0
013-0	D0127R4A	-00	1,000	STK		FEDERRING DIN 127 A2 4 A						
00								0	N	A	FB	B 0
014-0	D0934R4	-00	1,000	STK		MUTTER DIN 934 A2 M4						
00								0	N	A	FB	B 0
015-0	D0125P3,2	-00	8,000	STK		SCHEIBE DIN 125 KST 3,2						
00								0	N	A	FB	N 0
016-0	D0934R3	-00	8,000	STK		MUTTER DIN 934 A2 M3						
00								0	N	A	FB	N 0
019-0	6 4108 2280	-00	1,000	STK		RINGKABELSCHUH RB8						
00						STA-KON		0	E	A	FB	B 0
052-0	6 4105 0150	-00	32,000	STK		ADERENDHÜLSEN 1,5 ISOLI.						
00						ROT NR.550206		0	E	A	FB	B 0
053-0	6 4105 7007	-00	2,000	STK		ADERENDHÜLSE 0,75						
00						VPE-1000 55002020		0	E	A	FB	B 0
056-0	6 4108 2260	-00	1,000	STK		RINGKABELSCHUH RB6						
00						STA-KON NR. 5500673		0	E	A	FB	B 0
070-0	6 3401 0023	-00	10,000	STK		KABELBINDER 100X2,5						
00						ART-NR. 420-7608-000		0	E	A	FB	B 0
081-0	6 3401 1023	-00	6,000	STK		KLEBESOCKEL 146.1010.190						
00						ART.NR. 021-1676-000		0	E	A	FB	B 0
090-0	D0125R6,4	-00	1,000	STK		SCHEIBE DIN 125 A2 6,4						
00								0	N	A	FB	N 0
095-0	D0127R6A	-00	1,000	STK		FEDERRING DIN 127 A2 6 A						
00								0	N	A	FB	N 0
100-0	D0934R6	-00	1,000	STK		MUTTER DIN 934 A2 M6						
00								0	N	A	FB	N 0
105-0	1 1114 3270	-00	1,000	STK		ERDUNGSSCHRAUBE KPL.	01					4
00						M6X20		0	T	A	EF	A 0

Pos-P	Teilenr/AG	KO	Menge/V	E	MA	Benennung/Werkstoff	Znr-P/L	CH	T	BS	DA	A
-	1 1120 3327	-00	1,000			E-GERÄTEINSTALLATION A35						
letzte Änder.:20.10.93			STK			STANDARD 1						
125-0	6 5503 0011	-00	1,000			UNTERSATZ BURGESS C Q 2						
00			STK			B.NR. 9001615						
200-0	6 5305 1606	-00	1,000			WIPPSCHALTER MARQUARD						
00			STK			1605.0101 B.NR.37.0826						
296-0	6 3204 0011	-00	1,000			GEGENMUTTER PG11 MS						
00			STK									
386-0	6 3203 0011	-00	1,000			KNICKSCHUTZ-VERSCHRAUBUNG						
00			STK			PG11 151 LZ11						
603-0	6 3203 0011	-00	1,000			KNICKSCHUTZ-VERSCHRAUBUNG						
00			STK			PG11 151 LZ11						
636-0	6 6703 0014	-00	1,000			ANZEIGEPLATINE A35/1						
00			STK			WEB A35/1 (4TASTEN)						
653-0	6 3401 0036	-00	2,000			KABELBINDER 200X3,6						
00			STK			ANR.5214						
654-0	6 4108 2240	-00	1,000			RINGKABELSCHUH RB4						
00			STK			NR.5500671						
655-0	6 4252 9590	-00	2,000			SCHRAUBE FKSC M5X8						
00			STK			2959.0						
676-0	2 0120 2362	-00	2,000			ISOLIERABDECKUNG						3
00			STK			POCAN B4225 7X24X30						0
677-0	2 0120 2363	-00	2,000			ISOLIERABDECKUNG						3
00			STK			POCAN B4225 7X24X30						0
684-0	6 2500 0001	-00	1,000			ZULEITUNG H05VV-F 3G1,5						
00			STK			GRAU MIT STECKER 2M						
688-0	6 2703 0156	-00	1,400			VERDRAHTUNGSLEITUNG						
00			M			H07V-K 1,5 GRUEN/GELB						